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Global Climate Change:
Carbon Reporting Initiative

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Progress Report 1 for Year 7

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Putting Ideas to Work

1. Background

During this cooperative agreement we have made progress in developing what is now referred to as the AFOLU (Agriculture Forestry and Other Land Uses) Carbon Calculator that is composed of several tools to estimate the carbon impacts of different types of US AID project activities in the AFOLU sector. It has been active for four years and has been used to varying extents by USAID partners. This use has brought to light several areas that need improving and identified new components that could be added to improve its functionality. Under Year 6 of the cooperative agreement, we continued to improve the AFOLU carbon calculator (ACC) by incorporating newly produced global map products of forests (area, deforestation, and carbon stocks), collected and initiated preparation of data sets on mangrove forests, making adjustments to the underlying equations to reflect new data and new processes, and improving the calculation of the project effectiveness deduction in each relevant module. In addition the year 6 work also included updating the core of the calculator to make the interface more user-friendly and to be able to input geographically specific details of project locations (GIS shape-files).

2. Activities for Year 7

Task 1: Develop a detailed workplan for year 7

The workplan for Year 7 was completed and submitted to USAID in October 2012.

Sub-Task 1a. Data collection for emission factors

Literature reviews have been conducted to identify new spatial and non-spatial datasets that can be used to improve the USAID Calculator. Several spatial and literature resources were identified that are appropriate for use with the ACC and are described in more detail below. In addition, Winrock hired consultants to collect specific data and fill in gaps of information related to key metrics used in the Calculator, such as updating forest C stocks (see below).

Carbon Stocks

Mangroves

Global mangrove data obtained from USGS's Earth Resource and Observation Science (EROS) center continues to be cleaned, organized and analyzed. Rates of change have been calculated already for some regions including Mesoamerica and Southeast Asia. Once rates are estimated for all countries of interest, they will be compared to FAO's "The world's mangroves: 1980-2005." Any discrepancy in rates between FAO and spatially-derived rates will be investigated by consulting any available country-specific literature pertaining to the status of mangroves. Values for mangrove area of change and carbon stocks will be established by 3/1/2013.

Agroforestry Systems

Significant new information has been compiled by two Agroforestry specialists under year 6. The consultants also suggested modifications to the methods for estimating carbon sequestration by Agroforestry Systems (AFS) employed in the Calculator. Currently, Winrock is working on developing methods for grouping the carbon sequestration potential of each of the AFS types into distinct ecological regions dictated mostly by climatic regimes, and geographical regions (per continent). Improved models for carbon sequestration of each AFS are under work, refining the carbon sequestration estimates provided by the ACC.

In addition to improving the methods in the ACC, Winrock has also initiated the preparation of a publication of the literature review conducted by consultants along with improved models for C sequestration by AFS in a peer-reviewed scientific journal—the target for submission is June 2013

Selective Logging Timber Extraction Rates

Winrock has reviewed all potential sources of timber extraction rates for tropical forests and has concluded that such tropic wide data sets do not exist. Instead we are beginning to finalize the data base for this tool based on regional estimates published by the FAO (FAO Forestry Paper 30, published in 1982) combined with country specific data for some key tropical countries (e.g. Kalimantan, Brazil, Guyana, Republic of Congo) collected during year 6.   The final data base is under preparation and will be added to the tool during the second quarter.

Community forest management

No further progress since Year 6.

Timber Extraction Rates for Temperate Regions

No further progress since Year 6.

Secondary Forests

In the first quarter of Year 7 we prepared a report describing the methods and results of the analysis to establish improved models for estimating carbon sequestration by secondary forest growth. This report is in the process of being peer reviewed by experts on the topic and will be completed by the next quarter to validate conclusions and underlying assumptions. Feedback from reviewers will be assessed to determine whether any modifications to the model are needed.

Additional datasets
No further progress since Year 6.

Sub-Task 1b. Finalizing updating and validation of global forest carbon stock map.

Work by Dr. Saatchi on updating the forest carbon stock map is nearing completion—it is presently undergoing the final steps to produce the refined map as well as refining the map accuracy.

Sub-Task 1c. Refining estimates of deforestation rates.

Work is progressing on acquiring the new data on deforestation for the period 2005-2010. Communications with the scientists producing these data indicate the release of this product has been delayed to sometime around the spring, but actual publication date it is still uncertain and pending peer-review—it is likely that this new product may not be available for the tool until late 2013. Once Winrock acquires the product, we will need to process it to obtain deforestation rates by our administration units.

Task 2: Build and test tools

Subtask 2a. Modification of the forest management tool

No further progress since Year 6 (see Task 1a above on timber extraction rates).

Subtask 2b. Adding capability to add geographic specific details

An editing feature has been added to the map when selecting the location of the activity to be entered in the Calculator. Currently this feature does not yield default data specific to the polygon drawn on

the map (no project specific defaults), but discussion has already began and Winrock and AGS have a plan to fully develop this feature and make it operational in the ACC this year.

<u>Subtask 2c. Add an effectiveness rating calculation component</u>

Project effectiveness flowchart (based on questions/ flowchart) has been implemented through the use of a pop-up to guide users through a sequence of questions, the result of which sets the effectiveness percentage rating. Minor issues have come to light as users have used this module and these are being corrected.

<u>Subtask 2d. Policy and capacity building impacts</u>

A review of Performance Management Plans and Monitoring and Evaluation guidelines for current USAID projects is being conducted. The review will identify key indicators that can be used to measure impact.

<u>Subtask 2e. Develop a new bioenergy and land use tool.</u>

No further progress since year 6.

Task 3. Train USAID GCC Team and mission staff (extension of Task 9 of Year 5)

Two different trainings were held in the first quarter of Year 7:
1. Presentation to USAID E3 Global Climate Change team: A brief presentation of approximately 30 minutes on the overall scope, capability, functionality and methodological development of the AFOLU C Calculator was given at the USAID E3 GCC retreat in Washington DC on January 15. The presentation focused on informing the GCC team on the applicability and the underlying data and methods used in the Calculator, but also served as starting point for discussing approaches for improving Missions Monitoring and Evaluation metrics for refining the reporting of USAID's climate change mitigation impact.

2. Training to Chemonics: A training sessions of approximately 4 hours was held at the Chemonics head office in Washington DC on January 17 to present the overall scope, capability, functionality and methodology used by the AFOLU C Calculator. The training included a presentation (~1.5 hour) and hands-on sessions on entering various projects on the Calculator. The training served as great starting point for discussing the metrics required from Projects/Missions to improve the reporting of carbon benefits generated, including potential M&E metrics. The training also served as great feedback, from user stand-point, to Winrock to the further refine the USAID AFOLU C Calculator.

Additionally, "call out boxes" have started to be posted on the Calculator online. Most of the key metrics already have a brief explanation about what such term actually means.

Task 4. Complete Decision Making Tool.

A draft version of the Decision Making has been developed in Excel and submitted to USAID for consideration and review in 2012.

Task 5: Management and implementation

<u>Subtask 5b. Host website.</u>

The current version of the ACC will be hosted by Applied Geosolutions during Years 7 and 8.

<u>Subtask 5c. Production of progress reports.</u>

This document represents the first progress report to be delivered to USAID during Year 7.